STATE OF VERMONT
PUBLIC SERVICE BOARD

In Re: Revised net-metering program pursuant)
to Act 99 of 2014)

Order entered: 8/29/2016

ORDER ON RECONSIDERATION

I. INTRODUCTION

By Order dated June 30, 2016 (the "June 30 Order"), the Vermont Public Service Board (the "Board") established a revised net-metering program pursuant to Act 99 of 2014 ("Act 99") to take effect on January 1, 2017.[1] In doing so, the Board stated that its decision was subject to reconsideration following a 10-day comment period.[2]

On reconsideration, the Board has modified the net-metering program that was described in the June 30 Order. For example, the Board has removed the annual 4% cap on the capacity of proposed net-metering systems and altered the provisions that would have prohibited pre-existing customers from applying accrued net-metering credits to bill charges that would otherwise be non-bypassable. Today's Order also provides a point-by-point discussion of the key provisions of the new program and the Board's reasons for adopting the policies and standards reflected in those provisions. The revised net-metering program (as modified by the changes made upon reconsideration) is set forth in full in Attachment A to this Order.

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1. Public Act No. 99 § 5 (d)(5) (2014 Vt., Adj. Sess.). The law states:
   On or before July 1, 2016, the Board shall finally adopt rules for a revised net metering program to take effect on January 1, 2017.
   (A) If the Board is unable to finally adopt the rules by July 1, 2016, the Board may issue an order by that date establishing a revised net metering program to take effect on January 1, 2017, if that order is followed by final adoption of rules for this program within a reasonable period.
2. *In Re: Revised net-metering program pursuant to Act 99 of 2014*, Order of 6/30/16, at 2.

II. BACKGROUND

In April of 2014, the Legislature passed Act 99, which required that the Board establish a revised net-metering program pursuant to the criteria and standards set forth in 30 V.S.A § 8010. Section 8010 directs the Board to develop a net-metering program that:

> (A) advances the goals and total renewables targets of this chapter and the goals of 10 V.S.A. § 578 (greenhouse gas reduction) and is consistent with the criteria of subsection 248(b) of this title;
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> (B) achieves a level of deployment that is consistent with the recommendations of the Electrical Energy and Comprehensive Energy Plans under sections 202 and 202b of this title, unless the Board determines that this level is inconsistent with the goals and targets identified in subdivision (1)(A) of this subsection. Under this subdivision (B), the Board shall consider the Plans most recently issued at the time the Board adopts or amends the rules;
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> (C) to the extent feasible, ensures that net metering does not shift costs included in each retail electricity provider's revenue requirement between net metering customers and other customers;
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> (D) accounts for all costs and benefits of net metering, including the potential for net metering to contribute toward relieving supply constraints in the transmission and distribution systems and to reduce consumption of fossil fuels for heating and transportation;
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> (E) ensures that all customers who want to participate in net metering have the opportunity to do so;
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> (F) balances, over time, the pace of deployment and cost of the program with the program's impact on rates;
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> (G) accounts for changes over time in the cost of technology; and
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> (H) allows a customer to retain ownership of the environmental attributes of energy generated by the customer's net metering system and of any associated tradeable renewable energy credits or to transfer those attributes and credits to the interconnecting retail provider, and:
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> > (i) if the customer retains the attributes, reduces the value of the credit provided under this section for electricity generated by the customer's net metering system by an appropriate amount; and
> >
> > (ii) if the customer transfers the attributes to the interconnecting provider, requires the provider to retain them for application toward compliance with sections 8004 and 8005 of this title.

In addition, Section 8010 requires that the net-metering program include provisions governing: (1) limits, as warranted, on the cumulative capacity of net-metering systems installed, (2) the transfer and abandonment of Certificates of Public Good ("CPGs"), (3) the respective duties of electric companies and customers, (4) the safe interconnection of net-metering systems, (5) the

formation of net-metering groups, and (6) the value to be assigned to excess electricity generated by net-metering systems.

III. SUMMARY OF COMMENTS

The Board received more than 100 comments in response to the June 30 Order. A large number of these comments opposed changes to the net-metering program that would affect existing net-metering customers. These comments generally expressed support for renewable energy and encouraged the Board not to revise the net-metering program in a manner that would make it more difficult for Vermonters to engage in net-metering. The Board also received some comments generally supporting the revised net-metering rule. These comments stated that the elements of the program described in the June 30 Order struck a proper balance between encouraging renewable energy and protecting ratepayers.

The Board also received a number of more detailed comments from utilities, renewable energy developers, commercial customers, residential customers, towns, and government agencies requesting specific changes to the net-metering program. Below is a summary of the issues that drew significant comment.

State-Wide Net-Metering Cap

The revised net-metering program announced in the June 30 Order contained an annual limit on the cumulative capacity of net-metering systems installed. The capacity limit was 4% of the state's peak capacity. This provision was intended to manage the pace of development of net-metering systems in Vermont. A number of comments, including those from the Vermont Department of Public Service (the "Department"), the Agency of Natural Resources, and many renewable energy developers, expressed opposition to a 4% annual limit because, according to the comments, annual caps create market disruptions and encourage a "rush to the door" by project applicants seeking to secure space within the annual quota. Opponents of the 4% annual cap point to the biennial update process as a better mechanism for controlling the pace and the costs of the net-metering program.

Other comments supported the annual cap as a necessary safeguard to protect against the potential rate impacts of net-metering. One comment stated that 4% of Vermont's annual peak capacity is approximately 40 MW and recommended that the Board adopt a lower, 2% cap.

Non-Bypassable Charges

Many developers and customers of net-metering projects opposed the requirement that all customers, whether net-metering or not, pay the monthly charges that can currently be zeroed out by net-metering customers with sufficient credits. These comments argued that these "new" charges are unjustified. The comments disputed that net-metering has the potential to shift costs from net-metering customers to customers who do not net-meter.

Some utilities requested clarification as to whether some non-bypassable charges, such as the energy efficiency charge, would be calculated using gross or net consumption. Others asked if the utility could decide whether to treat certain charges as non-bypassable.

Effect of Program Revisions on Existing Net-Metering Customers

Many comments insisted that pre-existing customers should not have to pay non-bypassable charges because these customers chose to install net-metering systems based on the assumption that they would not be subject to the charges if they produced sufficient credits. According to the comments, pre-existing customers should be able to continue to rely on those assumptions to realize a return on their investment.

Financial Incentives For Net-Metering

Some comments suggested that the revised net-metering rule does not provide sufficient financial incentives to encourage net-metering. Specifically, these comments recommended that the value of the siting adjustors for Category III and Category IV systems should be 1 cent higher, which was the amount provided for in earlier drafts of the net-metering program. According to these comments, it costs more to develop net-metering systems in the areas identified as "preferred." For example, one comment stated that " the anticipated result of the

proposed rule is that due to these economics, very few community solar projects at the 150kW scale will be built under the pricing of the new rules."

Other comments contended that the level of compensation provided for in the revised net-metering program was appropriate or possibly too generous. For example, one comment stated that the program "offers sufficient incentives to encourage the continued adoption of net metering while reducing the subsidy inherent in the current program." Several comments noted the apparent trend of decreasing costs to install net-metering systems and stated that state law requires the Board to "account for changes over time in the cost of technology."

500 kW Customer Limit

Some comments expressed concern about the 500 kW per-customer limit set forth in Section 5.125 of Attachment A. These comments noted that large customers, including schools and towns, would not be able to offset all of their electricity usage. Other comments recognized a "rationale for limiting large, private users' ability to offset electric bills that could run into the millions annually" but argued that "continuing to allow public entities to net-meter a substantial portion of their electric usage comes with substantial public benefits."

Siting Requirements for Net-Metering Systems Larger than 150 kW

Several comments, including those from the Department and those from renewable energy interest groups, expressed disappointment that the revised net-metering program does not provide for so-called "Category V" net-metering projects, which are systems that are larger than 150 kW and not located on a "preferred site." These comments stated that large community solar projects are necessary to ensure that customers who cannot locate net-metering systems on their own property can participate in the net-metering program.

The Application Review Process

Some comments observed that Acts 99 and 174 required the Board to "seek to simplify the application and review process as appropriate, including simplifying the application and review process to encourage group net metering systems when the system is at least 50% owned

by the customers who receive the bill credits for the electricity generated by the system." These comments encouraged the Board to further simplify the review process for community solar systems.

Implementation Issues for Utilities

Some utilities pointed out that the timeframe for filing revised tariffs to implement the program will be too tight, especially given the possibility that the net-metering program to be adopted as a final rule could ultimately differ from the program adopted here.

IV. DISCUSSION

The Board has reviewed and considered all of the comments filed on the June 30 Order. In doing so, the Board was also prompted to review the materials submitted throughout the Act 99 workshop process and the multiple rounds of comments filed regarding the previously issued drafts of the net-metering rule. Below is a general discussion of the reasons for the structure of the revised net-metering program, followed by a section-by-section review of Attachment A to the June 30 Order. For each section there is a summary and a description of the Board's rationale for each section. Where the Board has changed the net-metering program on reconsideration, the Board has also included a discussion of such changes.

Additionally, the Board received several comments suggesting technical corrections or stylistic improvements to Attachment A. These comments were very helpful, and though they are not discussed in detail in this Order, many of these non-substantive edits are reflected in the revised version of Attachment A.

General Overview of the Revised Net-Metering Program

Net-metering is the process of measuring the difference between the electricity supplied to a utility customer and the electricity supplied by the customer's generation system during the customer's billing period.[3] Net-metering offers several potential benefits for Vermont and ratepayers. First, net-metering systems can provide renewable energy for Vermont, supporting

3. 30 V.S.A. § 8002(15).

Vermont's greenhouse gas reduction and renewable energy goals. Second, net-metering can provide benefits for ratepayers by avoiding line-losses, reducing capacity charges, and reducing transmission costs. Finally, net-metering can create local jobs for installers of net-metering systems. For these reasons, the Legislature expanded the net-metering program and provided incentives to stimulate the development of net-metering systems.

Under current state law, customers participating in net-metering are credited with either 19 or 20 cents per kWh of energy produced by their system.[4] Net-metering customers are also allowed to retain the renewable energy credits ("RECs") that are generated by the net-metering system. Net-metering customers also have the option of selling their RECs, thereby realizing additional economic value from their net-metering system.[5] In the alternative, net-metering customers may elect to transfer RECs to their utility. Under existing state law, utilities must retire net-metering RECs.[6]

These facets of the current net-metering program are powerful economic incentives to participate. However, these incentives are offered at a cost to ratepayers because net-metered power costs more than alternative sources of renewable energy. For example, developers of moderate-sized solar plants have expressed strong interest in securing long-term contracts for energy, capacity, and RECs at 10.8 to 12 cents per kWh.[7] Additionally, Vermont utilities have recently developed moderate-sized solar projects at estimated costs well below 19 or 20 cents per kWh.[8] These lower-cost alternative sources of in-state renewable energy offer benefits similar to those provided by net-metered power, such as avoided transmission costs, capacity charges, and line losses.[9]

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4. 30 V.S.A. § 219a(h)(1)(K). The Board recognizes that the customers of Washington Electric Cooperative receive net-metering service on different terms.

5. REC markets fluctuate significantly. Depending on which state's renewable portfolio standard a generator is qualified to participate in, REC values can be as little as 1 cent or more than 6 cents per kWh. U.S. DEPARTMENT OF ENERGY, Green Power Markets, last viewed on August 1, 2016, available at: http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=5

6. 30 V.S.A. § 219a(h)(1)(I).

7. Docket Nos. 7873 and 7874, Order of 5/27/16.

8. *Petition of GMPSolar - Hartford, LLC*, Docket No. 8580, Order of 6/30/16, at 8.

9. *Petition of GMPSolar - Richmond,* Docket No. 8564, Order of 3/23/16, at 12.

Additionally, in cases where net-metering customers retain RECs, the utility is purchasing energy that it cannot count as renewable for purposes of meeting Vermont's energy goals or renewable energy standards. To the extent that these RECs have been sold outside Vermont, the current net-metering program has not been effective in producing more renewable energy for Vermont.

The explosive growth of net-metering in Vermont— particularly due to the development of large net-metering projects— is a direct testament to how attractive the current net-metering incentives are. From 2014 to the end of 2015, net-metering capacity nearly doubled, with a particularly sharp spike in applications as Green Mountain Power Corporation ("GMP") approached the statutory 15% capacity limit. For example, in a 30-day period from October to November of 2015, more than 27 MW of new, large net-metering projects applied for interconnection in the service territory of GMP.[10] As a result, GMP's program exceeded the statutory limit on net-metering capacity and was closed to projects greater than 15 kW.

Net-metering now represents a significant volume of Vermont's new generation resources. Approximately 130 MW of net-metering capacity will be installed under the current program.[11] The program is now larger in terms of capacity than the standard-offer program, which the Legislature specifically directed the Board to implement in a paced manner over 10 years.[12] These facts have led the Board to conclude that the current pace of net-metering program needs to be moderated so as to be sustainable in the long term and to mitigate associated rate impacts. Accordingly, the Board has designed the revised net-metering program in a manner directed at: (1) reducing costs to ratepayers, (2) moderating the pace of development so that development is more sustainable, and (3) reducing the environmental impacts associated with the construction of net-metering systems. The revised program is designed to allow the Board to periodically review and balance the benefits and costs of net-metering and to achieve a

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10. In Docket 8652, which concerned GMP's petition to exceed the statutory net-metering cap, GMP provided the Board with a copy of its interconnection queue. A copy of this document is available on GMP's website: http://www.greenmountainpower.com/upload/photos/426Net_Meter_Queue_for_Web_062716.pdf

11. An accounting of the capacity of net-metering systems installed in each Vermont distribution utility's service territory is available on the Department of Public Service's website: http://publicservice.vermont.gov/renewable_energy/net_metering.

12. 30 V.S.A. § 8005a(c) (establishing a 127.5 MW cumulative capacity for the standard-offer program).

level of deployment that will support Vermont's greenhouse gas reduction goals and renewable energy goals.

The recent development of net-metering projects is now evident in many Vermont communities. Throughout the Act 99 process, the Board received ample feedback from Vermont municipalities to the effect that the revised net-metering program should provide better opportunities for towns and adjoining landowners to participate in the siting process for net-metering projects. Accordingly, the Board has endeavored to improve the participation component of the net-metering program. Furthermore, the Board has concluded that the net-metering program must be designed to reduce the environmental impacts associated with the construction of net-metering systems by encouraging the construction of net-metering systems in previously developed areas and in locations identified by municipalities as suitable for development.

Section-by-Section Discussion of the Revised Net-Metering Program

PART I: GENERAL PROVISIONS

5.101 Purpose and Scope

This section defines the scope of the rule and identifies the Board's general statutory authority to establish a net-metering program. This section also prohibits the commencement of site preparation for or construction of a net-metering system or the conversion of an existing plant into a net-metering system without first obtaining a CPG under this Rule.

5.102 Computation of Time

This section governs the computation of time in all proceedings arising under this rule. The rule largely mirrors Rule 6 of the Vermont Rules of Civil Procedure. However, the language has been simplified to make the rule easier to read.

5.103 Definitions

Section 5.103 contains the material definitions that apply to the net-metering program.[13] This section introduces several concepts that generated substantial comments, including:

> *"Adjustor" means a positive or negative charge applied to production kWh based on factors related to site selection (Site Adjustor) and retention of tradeable renewable energy credits (REC Adjustor).*

The Board has chosen to use "adjustors" to implement several of the criteria identified in 30 V.S.A. §§ 8010(c)(1) and (2). In designing a net-metering program, the Board must account for all costs and benefits of net-metering, balance the pace of deployment of net-metering systems with the program's impact on rates, and account for changes over time in the cost of technology.[14] In addition, the Board is required to reduce the value of a net-metering credit if a customer retains ownership of RECs.[15]

The Board has chosen to use siting adjustors to encourage the environmentally beneficial siting of net-metering projects and thereby help ensure that such projects are in the public good pursuant to 30 V.S.A. § 248. Siting adjustors also allow the net-metering program to better account for the benefits and costs of net-metering pursuant to 30 V.S.A. § 8010(c)(1)(D). For example, the initial siting adjustors provide greater financial incentives to construct net-metering systems that have limited environmental impacts, such as systems that are located on previously developed areas like roofs and parking lots.

The REC adjustor is a function of the net-metering program required by the Legislature.[16] The Board views the REC adjustor as an important tool for ensuring that the benefits conferred on participants in the net-metering program are proportional to the attributes of the products that the net-metering customer is supplying to the electric company.

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13. Readers will also find that the definition of "Group Net-Metering" has been changed. This change was made to reflect the current definition of this term set forth in Section 8002(10) of Title 30.

14. 30 V.S.A. § 8010(c)(1)(A)-(H).

15. Section 8010(c)(1)(H)(I) states that "if the customer retains [RECs, the rule must] reduce the value of the credit provided under this section for electricity generated by the customer's net metering system by an appropriate amount.

16. *Id*.

Furthermore, the siting and REC adjustors allow the Board to pace the deployment of net-metering systems and to account for future changes in the price of technology through the "biennial update process" described in Section 5.127. In summary, the use of adjustors, coupled with the biennial update proceedings, will allow the Board to consider current information to ensure that the compensation provided to net-metering customers is fair to both net-metering customers and to ratepayers generally.

> *"Amendment" means one or more of the following changes to the physical plans or design of a net-metering system. An amendment is either "major" or "minor":*
> *(1) The following changes constitute a "major" amendment:*
> *(a) increasing the nameplate capacity of the net-metering system by more than 5% or reducing the nameplate capacity of the net-metering system by more than 60%;*
> *(b) moving the limits of disturbance by more than 50 feet;*
> *(c) changing the fuel source of the net-metering system; or*
> *(d) any other change that the Board, in its discretion, determines is likely to have a significant impact under one or more of the criteria of Section 248 applicable to the net-metering system.*
> *(2) The following changes constitute a "minor" amendment:*
> *(a) reducing the nameplate capacity of the net-metering system by less than 60%;*
> *(b) proposing additional aesthetic mitigation; or*
> *(c) any other change to the physical plans or design of the system that is not a major amendment.*

The definition of "Amendment" gives guidance to applicants and CPG holders about how to obtain authorization for amendments to proposed or existing net-metering systems pursuant to 30 V.S.A. § 248. The rule establishes two classes of amendments, "major" and "minor." The intent of this section is to streamline the process of bringing minor amendments to the attention of the Board and other relevant parties. This section also seeks to clarify the process for review and approval of major amendments, which will be the same as the review process for new applications.

In response to comments from GMP and the Town of New Haven, the Board has altered the definition of "major amendment" to include reducing the nameplate capacity of the generator by more than 60%. GMP represents that ISO-NE criteria require revised interconnection studies

for projects that undergo such a significant change. Accordingly, we find it appropriate to characterize this type of change as a major amendment so that the Board can thoroughly review the effect of such amendments on system stability and reliability.

> *"Blended Residential Rate" means the lesser of either:*
> *(1) For electric companies whose general residential service tariff does not include inclining block rates, the $/kWh charge set forth in that electric company's tariff for general residential service;*
> *(2) For electric companies whose general residential service tariff does include inclining block rates, a blend of the electric company's general residential service inclining block rates that is determined by adding together all of the revenues to the company during the most recent calendar year from kWh sold under those block rates and dividing the sum by the total kWh sold by the company at those rates during the same year; or*
> *(3) The weighted statewide average of all electric company blended residential retail rates, as determined by the Board, whichever is lower.*

Pursuant to Sections 8010(c)(1)(F) and (c)(2)(F), the Board has chosen to use the "blended residential rate" as the base rate for determining the value of the credit received by net-metering customers for power produced. The blended residential rate is the lesser of three possible rates: (1) if an electric company does not use block rates, the company's general residential service rate; (2) if an electric company uses block rates, a blend of the company's residential service block rates; or (3) a weighted, state-wide average of blended residential rate. In practice, the weighted state-wide average rate acts as a cap on the value of a net-metering credit.

The primary reason for this rate structure is to promote an even pace of development across various utility service territories. Certain electric companies have residential rates that are higher than others. Using these above-average rates to calculate the value of a net-metering credit could potentially make net-metering in those service territories a more attractive investment as compared to net-metering systems in other service territories and result in undue development pressure, and thus a potential adverse effect on rates, in the service territories of companies with higher-than-average retail rates. Using a state-wide blended residential rate as a cap for the value of a net-metering credit will help ensure that development is not focused in any

one service territory.

In summary, the use of the blended residential rate will help contain costs of the net-metering program.

> *"Category I Net-Metering System" means a net-metering system that is not a hydroelectric facility and that has a capacity of 15 kW or less.*
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> *"Category II Net-Metering System" means a net-metering system that is not a hydroelectric facility that has a capacity of greater than 15 kW and less than or equal to 150 kW, and that is sited on a preferred site.*
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> *"Category III Net-Metering System" means a net-metering system that is not a hydroelectric facility, that has a capacity of greater than 150 kW and less than or equal to 500 kW, and that is sited on a preferred site.*
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> *"Category IV Net-Metering System" means a net-metering system that is not a hydroelectric facility, that has a capacity of greater than 15 kW and less than or equal to 150 kW, and that is not located on a preferred site.*

Pursuant to 30 V.S.A.§§ 248 and 8010(c)(1)(A)-(G), the Board has established four pricing categories of net-metering systems to tailor financial incentives to reflect each category's environmental characteristics and the economies of scale for different sizes of systems. The Board received substantial comment on the values of these financial incentives. The initial values for siting adjustors applicable to these categories are described under Section 5.126, below. The Board also received substantial comment regarding "Category V Net-Metering Systems." This subject is addressed under Section 5.104, below.

> *"Preferred Site" means one of the following:*
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> *(1) A new or existing structure whose primary use is not the generation of electricity or providing support for the placement of equipment that generates electricity;*
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> *(2) A parking lot canopy over a paved parking lot, provided that the location remains in use as a parking lot;*
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> *(3) A tract previously developed for a use other than siting a plant on which a structure or impervious surface was lawfully in existence and use prior to July 1 of the year preceding the year in which an application for a certificate of public good under this Rule is filed. To qualify under this subdivision (3), the limits of disturbance of a proposed net-metering system must include either the existing structure or impervious surface and may not include any headwaters, streams, shorelines, floodways, rare and irreplaceable natural areas, necessary wildlife*

habitat, wetlands, endangered species, productive forestlands, or primary agricultural soils, all of which are as defined in 10 V.S.A. chapter 151;

(4) Land certified by the Secretary of Natural Resources to be a brownfield site as defined under 10 V.S.A. § 6642;

(5) A sanitary landfill as defined in 10 V.S.A. § 6602, provided that the Secretary of Natural Resources certifies that the land constitutes such a landfill and is suitable for the development of the plant;

(6) The disturbed portion of a gravel pit, quarry, or similar site for the extraction of a mineral resource, provided that all activities pertaining to site reclamation required by applicable law or permit condition are satisfied prior to the installation of the plant;

(7) A specific location designated in a duly adopted municipal plan under 24 V.S.A. chapter 117 for the siting of a renewable energy plant or specific type or size of renewable energy plant, provided that the plant meets the siting criteria recommended in the plan for the location;

(8) A site listed on the National Priorities List (NPL) established under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. chapter 103, if the U.S. Environmental Protection Agency or the Agency of Natural Resources confirms each of the following:

(a) The site is listed on the NPL;

(b) Development of the plant on the site will not compromise or interfere with remedial action on the site; and

(c) The site is suitable for development of the plant;

(9) On the same parcel as, or directly adjacent to, a customer that has been allocated more than 50 percent of the net-metering system's electrical output. The allocation to the host customer may not be less than 50 percent during each of the first 10 years of the net-metering system's operation.

Pursuant to 30 V.S.A.§§ 248 and 8010(c)(1)(A)-(G), the Board has established "preferred sites" for net-metering systems to encourage the development of net-metering systems in locations that minimize the environmental impact from the construction of such systems and to encourage the construction of net-metering systems closer to the load they serve. Net-metering systems that are located on preferred sites will receive financial incentives. However, net-metering systems may be located on sites other than preferred sites, but the price paid for electricity generated by such systems will be reduced to reflect the environmental and land-use costs of constructing such systems in areas that do not qualify as preferred sites.

In the case of systems larger than 150 kW, the Board has determined that such projects must be located on preferred sites in order to be eligible to participate in net-metering. This

policy decision is intended to ensure that net-metering projects are in the public good pursuant to 30 V.S.A. § 248. The net-metering program offers a valuable suite of financial and regulatory incentives, including the ability for customers to offset their electrical usage at favorable rates and through a streamlined permitting process. Therefore, the Board finds that it is appropriate to encourage the development of larger renewable energy systems that are not located in preferred sites through more cost-effective state renewable energy programs, such as the standard-offer program or mandatory purchases pursuant to Board Rule 4.100.[17] In addition, developers may negotiate bilateral contracts with utilities. These alternative paths provide such generators with stable pricing that is market-based, and the permitting process uses the procedures of Section 248.

The Board was not persuaded by the arguments set forth in some comments asserting that these provisions will prohibit or discourage community solar projects. The revised net-metering program does not restrict community solar arrays with capacities of up to 150 kW on any sites. Additionally, larger community arrays with capacities up to 500 kW are permitted provided they are located on preferred sites. Therefore, the Board finds that the revised net-metering program still provides opportunities for community solar projects.

> *"Pre-Existing Net-Metering System" means a net-metering system for which a completed CPG application was filed with the Board prior to January 1, 2017, and whose completed application was filed at a time when net-metering was being offered by the electric company pursuant to 30 V.S.A. § 219a (h)(1)(A) as the statute existed on December 31, 2016.*

Pursuant to Section 10(c) of Act 99, the Board has exempted pre-existing systems from certain provisions of the revised net-metering program and required that such systems will continue to receive financial incentives provided under Section 219a(h)(1)(K) for 10 years from the date the system was commissioned. The treatment of pre-existing systems is described in greater detail under Section 5.124, below.

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17. Board Rule 4.100 is Vermont's implementation of the Public Utility Regulatory Policies Act ("PURPA").

> *"Non-Bypassable Charges" means those charges on the electric bill defined in an electric company's tariffs that apply to a customer regardless of whether they net-meter or not. Non-bypassable charges may not be offset using current or previous net-metering credits. A customer is liable for payment of these charges regardless of whether the customer has a credit balance resulting from net-metering. The customer charge, energy efficiency charge, energy assistance program charge, any on-bill financing payment, and any equipment rental charge are non-bypassable charges.*

The Board has determined, pursuant to Section 8010(c)(2)(C), that the customer charge, energy efficiency charge, energy assistance program charge, any on-bill financing payment, and any equipment rental charge should be non-bypassable charges. This means that net-metering customers will not be able to apply any accrued net-metering credits to these charges. The Board has decided on this policy to ensure that net-metering does not shift costs between net-metering customers and other customers as required by Section 8010(c)(1)(C). Non-bypassable charges reflect costs attributable to a customer regardless of whether the customer net-meters. Non-bypassable charges are not new fees or charges that are specially charged to net-metering customers. Instead, non-bypassable charges are bill items that are currently assessed to customers and that the Board has determined should not be offset by excess production from new net-metering systems after January 1, 2017.

The primary example of a non-bypassable charge is the customer charge. The Board has long pursued a policy of cost-based rates in order to send customers accurate price signals about their electricity consumption.[18] In order to set energy rates (i.e., a customer's kWh charge) as close as possible to the marginal cost of energy, an electric company must, among other tasks, identify which of its costs do not vary with a customer's consumption (for example, metering and billing costs). These costs are typically allocated to the customer charge.[19] It is important to realize that the electric company incurs these customer-related costs even if a net-metering customer produces enough electricity to offset all of his or her usage; to the extent the electric

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18. *In Re Green Mountain Power Corp.*, Docket No. 6958, Order of 10/21/05, at 17.

19. In practice, because rate design is as much art as it is science, customer charges do not always collect all of the costs that do not vary with a customer's consumption. *See, e.g., Id*. at 18 (establishing that 62% of customer-related costs would be recovered through the customer charge).

company does not collect revenue from that net-metering customer to cover the customer charge, these costs are shifted to other customers.

Another example of a non-bypassable charge is the energy efficiency charge. The energy efficiency charge is set at a level that would realize "all reasonably available, cost-effective energy efficiency savings."[20] Net-metering customers benefit from the savings produced by electric energy efficiency programs and can also participate in such programs. Accordingly, the Board believes it is important for net-metering customers to contribute equally to the state's electric efficiency programs.

Finally, as discussed further below under Section 5.124, the Board has decided on reconsideration to exempt pre-existing net-metering customers from paying non-bypassable charges for a period of 10 years.

PART II: REGISTRATIONS AND APPLICATIONS FOR CPGS

5.104 Eligibility

Pursuant to 30 V.S.A.§§ 248 and 8010(c)(1)(A)-(G), the Board has established criteria and procedures for the review of applications for CPGs. This section makes clear that to be eligible to apply for a CPG, a net-metering system must be a Category I, II, III, or IV system or a hydroelectric facility. The most significant effect of this section is that larger net-metering systems (greater than 150 kW) that are not hydroelectric systems must be sited on a "preferred location" to be eligible to participate in the net-metering program.

The Board received many comments on this feature of the revised net-metering program. Opponents of this provision stated that it will discourage the development of community solar arrays.

The Board has considered these comments and finds them unpersuasive. Larger systems that are not sited on preferred sites more closely resemble merchant generators. The majority of these systems are located far away from the retail customers that receive net-metering credits.

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20. 30 V.S.A. § 209(c)(3)(B).

Much like wholesale generators, such systems rely on the grid to export power to other retail users. Accordingly, as a matter of policy this type of development should be compensated through bilateral contracts or through participation in the regional wholesale market as opposed to net-metering. Furthermore, given the size and scope of these facilities, it is appropriate to review proposals for these facilities using the full procedures of Section 248 unless such large net-metering systems are located on preferred sites.

5.105 Registration of Hydroelectric Facilities, Ground-Mounted Photovoltaic Facilities of up to 15 kW in Capacity, and Roof-Mounted Photovoltaic Net-Metering Systems of Any Capacity

This section implements the Board's obligation to establish a process for obtaining a CPG prior to constructing a net-metering facility. As required by Section 8010, the Board has simplified this process "as appropriate." Because small and roof-mounted solar net-metering systems have limited environmental or aesthetic impacts, the Board has determined that it is appropriate to provide a very simple process for obtaining permission to construct these types of systems. Additionally, the Board has included hydroelectric facilities of any capacity in this section because these facilities are subject to licensing by the Federal Energy Regulatory Commission and have been subjected to an appropriate environmental review in that process.

The Board has altered this section to make the registration procedure applicable only to small photovoltaic, roof-mounted photovoltaic, and hydroelectric net-metering projects. The Board has done this to enable wind facilities to be appropriately reviewed to ensure that the environmental and aesthetic impacts of such facilities are not undue. For example, even very small wind turbines are frequently installed on tall poles that potentially could result in aesthetic impacts if not sited properly. Additionally, the Legislature recently required the Board to adopt sound standards for small wind facilities. Accordingly, the Board has determined that a registration procedure is not appropriate for small wind facilities.

The Board has processed only a handful of applications for net-metering systems that use technologies other than photovoltaic, wind, or hydropower. Accordingly, the Board does not have sufficient experience with other technologies to conclude that such projects will have limited

associated environmental or aesthetic impacts. Therefore, the Board concludes that it is not appropriate to use a registration process for these novel types of systems.

5.106 Applications for Ground-Mounted Photovoltaic Net-Metering Systems Greater Than 15 kW and Up to and Including 50 kW and for Facilities Using Other Technologies Up to and Including 50 kW

Section 5.106 describes the process and requirements for filing a net-metering CPG application for ground-mounted photovoltaic systems that are greater than 15 kW and up to and including 50 kW in capacity. This section also applies to net-metering systems using other technologies that are up to and including 50 kW in capacity (except for hydroelectric systems). As required by Section 8010, the Board has simplified this process "as appropriate," given the characteristics of the net-metering systems subject to the process set forth in this section of the rule. The review process described in this section consists of three steps: (1) a 45-day advance notice,[21] (2) the submission of an application form and site plan, and (3) a 30-day comment period. In certain cases, a party may request a fourth step, an evidentiary hearing.

This process is greatly simplified when compared to the full procedures of 30 V.S.A. § 248, which include: (1) a 45-day advance notice, (2) prefiled testimony and exhibits, (3) a public hearing, (4) a site visit, and (5) an evidentiary hearing. The procedure provided for in this section allows net-metering projects to file through a simplified application form (as opposed to testimony) and, where there is no controversy regarding the proposal, dispenses with the hearings required by Section 248.

On reconsideration, the Board has included the Natural Resources Board as an entity entitled to receive notice of applications for net-metering systems located on parcels that are subject to Act 250 land-use permits. The purpose of this revision is to ensure that net-metering projects are reviewed in light of any applicable conditions contained in Act 250 land-use permits.

5.107 Applications for Net-Metering Systems Greater Than 50 kW That Are Not Roof-

21. This 45-day notice is required by Section 8010(c)(3)(F)(ii), which states that the Board may not waive the pre-application notice required by Section 248(f) for net-metering systems greater than 15 kW.

Mounted Photovoltaic Systems or Hydroelectric Facilities

Section 5.107 describes the process and requirements for filing a net-metering CPG application for systems greater than 50 kW. As required by Section 8010, the Board has simplified this process "as appropriate," given the characteristics of the net-metering systems subject to the process set forth in this section of the rule. The review process for net-metering systems that are larger than 50 kW consists of three steps: (1) 45-day advance notice, (2) the submission of testimony and exhibits, and (3) a 30-day comment period. This process is simplified in comparison to the full procedures of 30 V.S.A. § 248, because uncontroversial proposals may be approved without hearing.

Some comments have asserted that the process provided in Section 5.107 is not simplified enough. These comments also assert that the Board has not simplified the application and review process for community net-metering systems that are more than 50% customer-owned. The Board has considered this issue but has decided not to change the review process in the manner requested. The Board is unaware of any information suggesting that the ownership structure of a net-metering facility is relevant to the Board's review of such projects under the environmental criteria of Section 248. Therefore, the Board finds that it is not appropriate to simplify procedures for the review of such applications any more than already provided for in Attachment A.

5.108 Amendments to Pending Registrations and Applications

Section 5.108 describes how the Board will review amendments to pending CPG applications and registrations. This section is intended to streamline the process for bringing amendments to the Board's attention and to provide clarity about the process for reviewing amendments. This provision is also intended to replace the current practice of "non-substantial change" requests. All amendments to pending net-metering CPG applications must be filed as either a minor or major amendment, using the procedures specified in Section 5.108.

If the proposed amendments are minor in nature, an applicant is required to provide notice of such changes. Minor amendments will not lengthen the review process.

If an applicant proposes a major amendment, then the applicant must withdraw the application and submit a new application.

5.109 Amendments to Approved Net-Metering Systems

Section 5.109 describes how the Board will review proposed amendments to approved net-metering systems. This section is intended to streamline the process for bringing amendments to the Board's attention and to provide clarity about the process for reviewing proposed amendments. This provision is also intended to replace the current practice of "non-substantial change requests." All amendments to approved net-metering projects must be filed as either a minor or major amendment, using the procedures specified in Section 5.109.

If the proposed amendments are minor in nature, the CPG holder is required to provide notice of such changes. There will be a 10-day comment period for parties to object to the CPG holder's characterization of the amendment as minor. If no objection is filed within the 10-day period, the minor amendment may be implemented without further action from the Board.

If a CPG holder proposes a major amendment, then the CPG holder must obtain prior Board authorization for the amendment by filing a complete CPG registration or application using the applicable procedures set forth in Sections 5.105, 5.106, or 5.107.

5.110 Transfer and Abandonment of CPGs

Pursuant to 30 V.S.A. § 8010(c)(2)(B), the Board has established simplified procedures for transferring net-metering CPGs. Section 5.110 governs the abandonment of net-metering CPGs.

This section contemplates two types of CPG transfers: (1) transfers involving the sale of the net-metering systems together with the property upon which the net-metering system is located and (2) CPG transfers where control of the net-metering system is transferred separately without a sale of the host property. For the first type of transfer, such transfers are effective at the time the host property changes ownership, provided the new owner files the form that the Board has created for this purpose.

For the second type, which typically involves larger systems located on leased land, the CPG holder must obtain Board approval prior to transferring the CPG. The Board will develop a form for this purpose.

Section 5.110 also deals with the circumstances in which a CPG may be abandoned. This section carries forward the standard currently codified in 30 V.S.A. 219a(d)(3), which required a

CPG holder to construct a net-metering system within one year of the date the CPG was issued. CPGs not used within one year are deemed abandoned. The Board will grant extensions of the one-year period for good cause shown.

Burlington Electric Department ("BED") recommends that the Board amend Section 5.110 to provide that a net-metering CPG should be deemed to be abandoned if the system ceases to produce electricity for a period of two years. The Board has considered this request and has decided not to revise Section 5.110 in the manner requested by BED at this time. The Board will reconsider BED's request if it receives additional comments on this issue once a rule is proposed for adoption.

5.111 Substantive Criteria of 30 V.S.A. § 248(b) Applicable to Net-Metering CPG Registrations and Applications

Pursuant to 30 V.S.A. § 8010, the Board may waive the requirements of 30 V.S.A. § 248(b) that are not applicable to net-metering systems. For systems located on roofs, the Board has decided it is appropriate to review such systems only for interconnection issues. All other substantive criteria of Section 248 have been conditionally waived because roof-mounted systems have little or no impact on the environment or land use.

For systems not located on a roof, the Board has determined it is appropriate to conditionally waive the following Section 248 criteria: (b)(4) (economic benefit), (b)(6)(least-cost integrated plan), (b)(7) (comprehensive energy plan), (b)(9) (waste-to-energy facility), (b)(10) (existing transmission facilities), and (b)(11) (woody biomass plants). Net-metering systems either do not or are not likely to raise a significant issue with respect to these criteria.

With respect to Section 248(b)(2) (need), the Board has determined that it is appropriate to waive this criterion, provided that the RECs produced by the net-metering system are being transferred to the utility. In light of the state's renewable energy standards, which require that utilities procure certain amounts of renewable energy, Vermont utilities have a significant need for renewable energy, and the Board therefore finds it is appropriate to waive this criterion in reviewing facilities that supply renewable power to the system.

In contrast, Section 5.111(C) provides that if an applicant elects to retain ownership of the

RECs generated by a net-metering system, then the applicant will be required to show that the project "is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy-efficiency and load management measures" pursuant to 30 V.S.A. § 248(b)(2). Such a showing is necessary because the net-metering facility will not be supplying renewable energy to the system. Therefore, it is appropriate to require such an applicant to demonstrate a need for the proposed facility.

ANR has requested that this section be revised to clarify which criteria contained in 10 V.S.A. § 6068 will be considered by the Board under Section 248(b)(5). On reconsideration, the Board has revised the language of Section 5.111(B) and (C) to make clear that applications for ground-mounted net-metering systems must address all of the criteria identified in Section 248(b)(5). As stated in Section 248(b)(5), the Board will give due consideration to the environmental criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8) and (9)(K) and greenhouse gas impacts.

5.112 Aesthetic Evaluation of Net-Metering Projects

Section 5.112 sets forth the criteria that the Board will use to evaluate the aesthetic impact of net-metering systems. Pursuant to 30 V.S.A. § 8010(c)(3)(D), in determining whether a net-metering system satisfies the aesthetics criterion contained in 30 V.S.A. § 248(b)(5), the Board is required to apply the so-called "Quechee test" as described in the case *In Re Halnon*, 174 Vt. 515 (2002) (mem.). Section 5.112 sets forth the elements of the test and also provides guidance to applicants and the public about what the Board will consider in reviewing net-metering projects under the Quechee test.

New Haven's comments anticipated that the Board would consider costs and power losses in determining whether potential aesthetic mitigation "would frustrate the purpose of the project."[22] According to New Haven, such cost considerations would run afoul of *Halnon*. We disagree. In *Halnon* the applicant did not prevail in arguing that alternative siting of the proposed

22. Section 5.112(E)(4).

wind turbine would cause "problems and increased costs associated with the project."[23] The applicant's argument was rejected specifically because of a failure to present evidence regarding the alleged "problems and increased costs" of relocating the turbine as an option for mitigating the impacts of the project.

Thus, *Halnon* does not exclude consideration of costs when examining the reasonableness of proposed mitigation. This interpretation of *Halnon* is consistent with other Vermont cases examining the reasonableness of mitigation under Quechee.[24] Accordingly, we have not modified the language of this section as requested by New Haven.

PART III: PARTICIPATING IN THE REVIEW OF APPLICATIONS FOR CPGS

Part III describes the procedures applicable to the review of net-metering applications filed pursuant to Sections 5.106 and 5.107. Part III does not apply to the review of net-metering registrations filed pursuant to Section 5.105. In cases where an electric company files an objection pursuant to Section 5.105(E), such disputes will be resolved using the dispute resolution procedures contained in Board Rule 5.500, which governs interconnection requests.

5.113 Obtaining Information About a Net-Metering CPG Application

Section 5.113 provides notice that persons seeking information about a net-metering CPG application may visit the web portal for the Board's electronic filing system or to contact the Clerk of the Board.[25] The public will be able to use this electronic filing system to review public documents, see a case's status, and find out about any schedule deadlines.

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23. *In re Halnon*, 174 Vt. 515, 517 (2002).

24. *See*, *In re Stokes Commc'ns Corp.*, 164 Vt. 30, 39 (1995) ("We think a generally available mitigating step is one that is reasonably feasible and does not frustrate the project's purpose. . ..We note that in some circumstances mitigating steps may be *unaffordable* or ineffective. In those circumstances, it is within the [Environmental] Board's discretion to grant or deny a permit.") (emphasis added).

25. The Board anticipates that Phase I of ePSB will be functional prior to January 1, 2017. However, as with the introduction of any new technology, there is likely to be a transition period during which some filings will need to be made in paper while the new system is brought online. Furthermore, depending on the timing and outcome of the rulemaking that the Board will be starting shortly, there may be a period after January 1, 2017, during which ePSB is still being modified to be consistent with the new rule.

5.114 Rules and Processes Applicable to the Review of Net-Metering CPG Applications

Act 174 of 2016 directed the Board to participate in a working group to review the current processes for citizen participation in Board proceedings and to make recommendations to promote increased ease of citizen participation in these proceedings. Thus, in keeping with the spirit of Act 174, the Board has endeavored to shape the revised net-metering program so as to make it easier for the public to navigate.

Part III eases the path to public engagement in Board proceedings by providing step-by-step instructions for citizens participating in the review of net-metering CPG applications. These instructions include guidance on how to submit comments, intervene, or request a hearing, and provides a description of how the Board will conduct hearings. In addition to adopting Part III, the Board intends to develop forms and templates to assist the public in using the procedures described herein.

Section 5.114 makes clear that Rule 5.100 describes the relevant procedures for the review of net-metering CPG applications. This reduces the need for the general public to cross reference the general rules of practice and other procedures that otherwise would apply in Board proceedings. However, to the extent that any procedure is not described in Rule 5.100, such procedures are governed by the provisions of Board Rule 2.200. Where there is a conflict between the procedures described in Rule 5.100 and any other Board rule, the provisions of Rule 5.100 are controlling.

5.115 Submission of Public Comments

Section 5.115 provides that members of the public who want to file comments on a net-metering CPG application must do so within 30 days from the date the application is determined to be administratively complete. The public will be able to see whether an application has been filed and whether the application is complete by visiting the web portal for the Board's electronic filing system or by contacting the Clerk of the Board. Public comments will be viewable on the Board's electronic filing system as well.

5.116 Party Status in Net-Metering CPG Proceedings

Section 5.116 establishes a new process for obtaining party status in the review of net-metering CPGs. Under the revised net-metering program, the majority of persons potentially affected by a net-metering project will be able to become a party by filing a simple notice of intervention, as opposed to a motion to intervene pursuant to Board Rule 2.209. The Board will adopt a simple form for this purpose. This procedure is consistent with 30 V.S.A. § 248(a)(4)(I), which requires that persons who have a right to appear as a party in Section 248 cases be able to obtain party status by filing a notice of intervention.

Section 5.116 provides this simplified process to obtain party status in the review of a net-metering CPG application:

> *(B) The following persons must obtain party status as follows:*
> *(1) The Vermont Department of Public Service is a party in any proceeding under this Rule.*
> *(2) The Agency of Natural Resources and the Natural Resources Board are parties in any proceeding for which they are entitled to receive notice of an application under this Rule.*
> *(3) The following persons will be granted party status by the Board only after filing a notice of intervention. The Board will provide a form for such purpose:*
> *(a) the electric company;*
> *(b) the legislative body and the planning commission of the municipality in which a facility is located, pursuant to 30 V.S.A. § 248(a)(4)(F);*
> *(c) the regional planning commission of the region in which a facility is located;*
> *(d) the regional planning commission of an adjacent region if the distance between the net-metering system's nearest component and the boundary of that adjacent region is less than or equal to 500 feet or 10 times the height of the facility's tallest component, whichever is greater;*
> *(e) adjoining landowners;*
> *(f) the Vermont Agency of Agriculture Food and Markets; and*
> *(g) the Vermont Division for Historic Preservation.*
> *(C) Any other person seeking to participate in a net-metering proceeding as a party must file a motion to intervene either in accordance with Board Rule 2.209 or by filing a form developed by the Board for use under this Rule.*

This simplified approach to intervention recognizes that these persons by definition have a substantial interest in net-metering cases whether under the standards for intervention prescribed under Board Rule 2.209(A) (intervention as of right) or 2.209(B) (permissive intervention). Significantly, adjoining landowners can now become a party by filing a simple form and without having to file a motion to intervene that addresses all of the standards in Board Rule 2.209. The Board believes this procedure will ease the process of participation in Board proceedings.

All other persons not listed in Section 5.116(B) are required to file a motion to intervene pursuant to Board Rule 2.209. This procedure will remain unchanged from the current rule. The policy objective served by maintaining this requirement is to ensure that the parties and the Board have adequate notice of the issues sought to be raised through such intervention.

On reconsideration, the Board has amended Section 5.116 to include the Natural Resources Board as a party in certain cases to ensure, where feasible, that the construction of net-metering systems does not conflict with the fulfilment of conditions contained in Act 250 land-use permits.

5.117 Requests for Hearing

Section 5.117 requires requests for a hearing to be filed within 30 days of when an application is determined to be administratively complete. Requests for hearing must be filed by a party or be accompanied by a notice of intervention or motion to intervene.

5.118 Circumstances When the Board Will Conduct a Hearing

Section 5.118 sets forth the criteria by which the Board will review requests for hearings. Under the current net-metering rule, a person requesting an evidentiary hearing must first demonstrate that an application raises a "significant issue" under the criteria of Section 248 in order to be granted a hearing during the review of a net-metering application.[26] During the workshop process, participants informed the Board that this requirement was impracticable within the 30-day comment period because of the need to investigate a case and produce sufficient proof

26. Board Rule 5.110(B)(4).

to support a hearing request.

In an attempt to ease participation in the Board's review process for net-metering projects, the Board will convene evidentiary hearings when one is requested and where the requestor has raised "one or more substantive issues under the applicable Section 248 criteria; or a substantive issue that is within the Board's jurisdiction to resolve."

5.119 Prehearing Conferences and Status Conferences

Section 5.119 provides that in cases where the Board has granted a evidentiary hearing request, a prehearing conference will be convened in advance of that hearing. The prehearing conference will provide an opportunity for the parties to meet for the purpose of clarifying the issues to be addressed at the evidentiary hearing, discuss evidentiary matters, explore settlement, and develop a schedule for the proceeding. A prehearing conference may be conducted telephonically to eliminate the burden of traveling to the Board's offices in Montpelier for such conferences.

5.120 Discovery

Section 5.120 provides that in cases where an evidentiary hearing will be held, parties may engage in limited discovery consisting of serving 20 questions on other parties. A party must obtain permission from the Board to undertake more extensive discovery.

The Board has chosen this procedure to simplify the review process and to protect non-lawyer participants from burdensome discovery in Board proceedings. The Board has observed instances in past net-metering proceedings where pro se parties struggled to meet the demands of discovery. Some comments requested that the Board allow for more extensive discovery procedures. However, in the Board's experience, the issues that are frequently disputed in net-metering cases are limited and therefore do not require wide-ranging or in-depth discovery in order to develop an adequate and reliable factual record during an evidentiary hearing. Therefore, the Board has decided to retain the 20-question limit and will not permit unlimited discovery as requested in some comments. In complex cases, parties may request additional discovery for good cause shown.

5.121 Procedure for Hearings

Section 5.121 describes the procedure for conducting an evidentiary hearing. The Board has included these provisions to provide guidance as to how the Board will conduct such a hearing.

One issue that was raised on reconsideration was whether the Board should require prefiled testimony or allow live direct testimony at a hearing. The Board's current practice requires prefiled testimony.[27] In the version of the net-metering program attached to the June 30 Order, the hearing procedure contemplated that parties would have the option of either prefiling direct testimony or testifying live at the hearing. The Board chose to allow live direct testimony because the Board thought this procedure would be simpler and would make evidentiary hearings more accessible to non-lawyers. For instance, in Vermont's small claims court, simplified evidentiary hearings are conducted using live direct testimony.[28]

However, some comments pointed out that some of the subject material addressed in the review of net-metering CPG applications is complex and technical in nature and therefore is better rendered through prefiled, written testimony. It was also pointed out that live testimony could have the undesirable effect of creating surprises for litigants and would take more hearing time.

After considering these comments, the Board has revised Section 5.121 to reinstate the requirement of prefiled testimony. The Board acknowledges that this procedure does require more preparation for parties. However, the burden of preparation is outweighed by the benefit of affording parties an opportunity to plan their cross-examination, thereby fostering the efficient and effective use of scarce hearing time. In order to facilitate participation in Board proceedings, the Board will develop templates for prefiled testimony to assist the public in preparing testimony for hearings. Also, when it will serve the ends of fairness and judicial economy, the Board will, in its discretion, allow a party to present live direct or rebuttal testimony.

5.122 Decisions

Section 5.122 states that after the evidentiary hearing and the filing of any briefs, the

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27. Board Rule 2.213.
28. V.R.S.C.P. Rule 6 (2014).

Board will issue a decision.

New Haven requests that the Board revise Section 5.122 to provide for hearing officer proposals for decisions. On reconsideration, the Board has revised the language of this section to make clear that in cases where the Board has not heard the case or read the record, a proposal for decision will be issued for comment by the parties. This procedure is a continuation of the Board's current practice and is consistent with the requirements of 3 V.S.A. § 811.

5.123 Appeals of Board Decisions

Notice of appeal to the Supreme Court of Vermont of any Board decision under this Rule must be filed with the Clerk of the Board within 30 days of the issuance of the decision. Appeal will not stay the effect of Board decisions absent further order by the Board or appropriate action by the Supreme Court of Vermont.

The purpose of this section is to provide notice to participants that Board orders are subject to review by the Supreme Court of Vermont.

PART IV: THE NET-METERING PROGRAM

5.124 Pre-Existing Net-Metering Systems

Section 5.124 provides that certain portions of the revised net-metering program do not apply to pre-existing net-metering systems. This provision is established pursuant to Section 10 of Act 99, which states that pre-existing net-metering systems shall continue to receive for a period of 10 years certain incentives that were provided for under previous state law.

As a preliminary matter, the Board appreciates the comments from New Haven that explained the provenance of the term "grandfathering." On reconsideration the Board has decided to revise this section to eliminate references to "grandfathering" and to instead refer to "pre-existing systems."

The Board also received many comments on whether pre-existing net-metering customers should be exempted from non-bypassable charges. Upon reconsideration, the Board has decided to exempt pre-existing systems from certain requirements of the revised net-metering program, including non-bypassable charges, for a period of 10 years from the date the system was

commissioned. The Board has chosen to provide this 10-year exemption in recognition that these systems were installed by customers who relied on a certain set of financial assumptions when they decided to engage in net-metering—a behavior the state has expressly sought to encourage in support of its renewable energy goals. The Board must balance these reliance interests of pre-existing customers with the need to design a revised net-metering program that, to the extent feasible, does not shift costs from net-metering customers to non-net-metering customers. As discussed below under Section 5.125, new customers participating in the revised net-metering program may not apply net-metering credits to non-bypassable charges. After the 10-year period provided for in this section expires, customers using pre-existing systems will similarly be required to pay non-bypassable charges to ensure that these costs are not shifted to customers who do not use net-metering systems.

Finally, several comments pointed out that applying all portions of Section 5.125 (energy measurement) to pre-existing systems could be construed as requiring the owners of such systems to install an additional meter. This was not the Board's intention, and the Board has revised Section 5.124 to make clear that pre-existing systems are not required to install a new meter.

5.125 Energy Measurement for Net-Metering Systems

Section 5.125 describes the method for measuring energy produced by a net-metering system, how to convert that energy into monetary credits, and how to apply those credits on a customer's bill. New net-metering customers will be required to install a meter to measure the production from the net-metering system (a "production meter"). This section contemplates two scenarios for the configuration of the production meter, the customer's billing meter, and the net-metering system: (1) systems where the net-metering system and production meter are "behind" the consumption meter, and (2) systems where the net-metering system and production meter are separate from the customer's billing meter. In the case of number (2), this scenario is common for group net-metering arrangements or community solar arrays, where the net-metering system is located somewhere other than on the customer's property.

5.126 Determination of Applicable Rates and Adjustors

Section 5.126 sets forth the applicable rates and adjustors that are the constituent parts of a net-metering credit. This section is adopted pursuant to Section 8010(c)(1)(A)-(G) and (c)(2)(F). The value of a credit is the sum of: (1) the applicable blended residential retail rate, (2) any applicable REC adjustor, and (3) any applicable siting adjustor.

The applicable blended residential retail rate is the lowest of three possible rates: (1) if the electric company does not have block pricing, the company's general retail rate, (2) if an electric company uses block pricing, then a blend of those rates, or (3) the weighted average of the blended residential rates for all Vermont electric companies. The Board has chosen this method of setting the value of a net-metering credit for two reasons. First, for utilities that use inclining block rates, employing a blended rate is administratively simpler because it does not require the use of multiple block rates in the billing calculation. Second, the Board has chosen to use a statewide average rate as a cap on the value of net-metering credits because some electric companies have retail energy rates that are significantly higher than the cost of obtaining comparable sources of energy. For example, the Village of Barton Electric Company's blended residential rate is approximately 17 cents per kWh. When added to any applicable REC adjustors and siting adjustors, the company could be spending over 20 cents per kWh for net-metered electricity, which is significantly more expensive than other sources of renewable energy.[29] This result would not be consistent with the directive in Section 8010(c)(1)(F) to balance the costs of the program with the impact on rates.

Some utilities requested clarification as to whether a customer's blended residential rate was "locked in" at the time the net-metering system was approved. The Board's intent is that the applicable blended residential rate will fluctuate with time. When an electric company receives approval to change its general residential service rate, the company is required to update its net-metering tariff to reflect the new rate. Only in cases where a company is using the state-wide average blended retail rate will there be a lag between changes in retail rates and changes in net-metering rates. The state-wide average rate will be calculated in the biennial update proceedings

29. For example, the market has shown significant interest in building new 2.2 MW solar arrays at rates between 10.8 and 12 cents per kWh. This price includes the purchase of RECs. Docket Nos. 7873 and 7874, Order of 5/27/16, at 5.

provided for under Section 5.127. Companies offering this rate will need to update their net-metering tariffs after the update proceedings. This procedure is necessary to ensure that companies that use the state-wide average rate are not required to file a new tariff whenever any distribution utility changes its rates and thus affects the state-wide average.

Section 5.126(B) establishes the initial values for REC adjustors and siting adjustors. Adjustors allow the Board to encourage and discourage certain behaviors through monetary incentives and to adjust the overall value of net-metering credits. The Board has established REC adjustors in order to implement the requirements of Section 8010(c)(1)(A),(C), (F), and (H)(1). The REC adjustors will encourage net-metering customers to transfer the RECs created by their systems to their utility, which will enable these RECs to be counted towards Vermont's renewable energy standards.[30] This is so that the energy produced by net-metering systems can be counted as renewable in Vermont and thereby support the state's goal to "reduce emissions of greenhouse gases from within the geographical boundaries of the state and those emissions outside the boundaries of the state that are caused by the use of energy in Vermont."[31] To the extent that net-metering customers elect to retain and sell their RECs out of state, these systems do not contribute to the state's greenhouse gas reduction goals because the greenhouse gas reductions may be claimed in other states.

REC adjustors also implement the requirements of Section 8010(c)(1)(D), which requires that the revised net-metering program account for the costs and benefits of net-metering. RECs have economic value to customers and to utilities. Under Section 8010(c)(1)(H)(ii), a utility must use net-metering RECs to meet that utility's statutory obligation under Vermont's renewable energy standards. To the extent the utility does not obtain sufficient RECs, the utility must purchase RECs from the market or build new plants that produce RECs. These are costs that utilities will incur and pass on to ratepayers. Customers can likewise sell a REC in the market, or the customer can retire the REC and thereby claim that the power that the customer consumed was renewable, both of which provide a benefit to the customer. Currently, net-metering customers receive the same amount of credit for the power produced by a net-metering system whether they

30. *See*, 30 V.S.A. § 8005.
31. 10 V.S.A. § 578.

provide the RECs to their utility or not. This outcome is unjust because it fails to accurately account for the characteristics of the energy provided to the system. As a matter of public policy, net-metering customers who transfer RECs to their utility and therefore support compliance with Vermont's renewable energy standards should be compensated at a higher rate because they have forgone personal benefits to support a public policy good. In comparison, net-metering customers who elect to retain RECs are making a choice to keep the value of those benefits for themselves and should be compensated accordingly.

Finally, REC adjustors implement Section 8010(c)(1)(H)(1), which requires the Board to reduce the value of the customer's net-metering credits if the customer retains RECs. This provision of the statute is not discretionary. The Board has chosen to set the values of the REC adjustors as positive (+3) cents per kWh for customers who transfer RECs to their utility and negative (-3) cents per kWh for customers who do not.[32] The net effect of the REC adjustors is that there is a 6-cent difference between the total compensation received by customers who chose to retain RECs and customers who elect to transfer RECs. The Board chose the initial REC adjustor values because they reflect the "alternative compliance price" or "ACP" for Tier II RECs created by Vermont's renewable energy standard statute.[33] Tier II is the "distributed generation" tier that includes net-metering systems. The 6-cent ACP is the price that a utility would pay if it were unable to comply with the renewable energy standard.

Some comments have suggested that the initial value of the REC adjustor is "punitive" and instead should reflect "the market price for New England Class 1 RECs." This idea was considered but the Board decided not to select this approach. As described above, the Board chose the initial REC adjustor values to reflect Vermont's ACP and to provide a strong incentive for net-metering customers to transfer their RECs to utilities so that these RECs would be retired in support of Vermont's renewable energy standards.[34] Furthermore, where a net-metering customer chooses to retain RECs, that customer is supplying its utility with non-renewable

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32. This 3-cent credit is added to the applicable blended retail rate of electricity. For example, if a customer's general service rate is 17 cents per kWh of electricity and the blended residential rate is 15 cents, this customer would receive 18 cents (15 +3) for each kWh produced by that customer's net-metering system.

33. 30 V.S.A. § 8005(a)(4)(A)(ii).

34. Section 5.126(B)(1).

energy. Accordingly, the Board does not believe it is appropriate to require utilities to account for such power at the blended retail rate, which is significantly above the wholesale cost of power.

Section 5.126(C) sets the initial value for "siting adjustors." Siting adjustors are intended to encourage net-metering customers to select more environmentally friendly sites for new net-metering systems. Siting adjustors differentiate between systems based on the size of the system to reflect the economies of scale attendant to larger systems. Finally, the siting adjustors allow the Board to pace the development of net-metering systems over time.

Pre-existing net-metering systems will continue to receive any incentive that system received pursuant to 30 V.S.A. § 219a(h)(1)(K) for a period of 10 years after a system was commissioned. After that period, the value of a credit received by a pre-existing net-metering system will be the applicable residential retail rate. Pre-existing systems will not be subject to any siting or REC adjustors.

5.127 Biennial Update Proceedings

This section establishes a biennial process by which the Board will determine the values of the REC adjustors, siting adjustors, the state-wide blended residential rate, and the criteria applicable to different categories of net-metering systems. This section is established pursuant to Section 8010(c)(1)(B)-(H). By revisiting the initial values of the REC and siting adjustors established in this program, the Board can ensure that: (1) the pace of deployment of net-metering systems is consistent with the state's renewable energy goals, (2) net-metering does not result in undue rate impacts, (3) the program accounts for changes in costs of technology over time, and (4) net-metering does not result in cost shifts between net-metering customers and non-net-metering customers.

5.128 Billing Standards and Procedures

Section 5.128 establishes the billing standards and procedures for net-metering. This section describes the respective duties of retail electricity providers and net-metering customers, pursuant to Section 8010(c)(2)(C).

Section 5.128(A) lists the items that an electric company must show on a customer's bill.

Section 5.128(B) provides that accumulated net-metering credits revert to the electric company if such credits are not used within 12 months.

Section 5.128(C) requires that net-metering customers may enroll their accounts in only one net-metering group arrangement at a time. This provision is necessary to prevent unduly complicated billing arrangements.

Section 5.128(D) states: "The cumulative capacity of net-metering systems allocated to a single customer may not exceed 500 kW. For example, a customer who has two accounts cannot have each account receive more than 50% of the output from two 500 kW net-metering systems because the cumulative capacity of the allocated share of those net-metering systems would exceed 500 kW." The purpose of this provision is to limit the total amount of net-metering credit that any single customer may receive.

Several comments opposed this provision. These comments stated that large institutions or municipalities should be able to offset all of their power consumption if they wish. Other comments recommended that this limitation be applied to individual customer accounts, as opposed to customers.

The net-metering program is intended to offer utility customers financial incentives to develop new, small-scale renewable energy resources. Renewable energy acquired through the net-metering program costs more than alternative sources of renewable energy.[35] Therefore, the net-metering program has an important, but limited, role to play in realizing the state's renewable energy goals. Large customers should not be permitted to leverage the incentives offered by the net-metering program to deploy fleets of net-metering systems to offset their own significant power costs at the expense of other ratepayers. If a customer wishes to generate more than 500 kW of power for its own use, it may do so by means other than net-metering. For example, such large customers may self-supply energy without net-metering.[36] Alternatively, if a large customer wants to be able to claim that its electricity consumption is sourced from renewable resources, it

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35. Under the net-metering program, customers who construct a 500 kW net-metering system are eligible to receive up to 16.7 cents per kWh of energy produced. This exceeds current market prices for renewable energy from other sources. *Supra*, n. 28. *See also, Petition of GMPSolar - Hartford LLC*, Docket 8580, Order of 6/3/16, at 8 (finding that the 5 MW solar project would have an estimated levelized cost of energy of 12.8 cents per kWh..).

36. 30 V.S.A. § 248(a)(2) (exempting from review under Section 248 "electric generation facilities that are operated solely for on-site electricity consumption by the owner of those facilities.").

may either buy RECs on the market or participate in its electric company's green power pricing program, if available.

State law directs the Board to consider the rate impacts of net-metering and to "ensure that all customers who want to participate in net-metering have the opportunity to do so."[37] The Board recognizes that the net-metering program provides benefits to the state through increased economic development and jobs, but these benefits must be balanced against the costs of offering the program. This balancing necessitates that there be limits to the amount of incentives any single customer can avail itself of in order to ensure that all customers can participate in net-metering without creating undue rate impacts. Accordingly, the limitation contained in Section 5.128(D) is one of several policies adopted by the Board to "right-size" the net-metering program for Vermont and to balance the various costs and benefits of the program. For these reasons, the Board has not altered the provisions concerning the 500 kW customer limit as requested in some comments.

Section 5.128(E) permits, subject to Board approval, a net-metering group to receive power from more than one net-metering system. However, the cumulative capacity of net-metering systems attributed to a group may not exceed 500 kW. This provision is consistent with Section 5.128(D) and is adopted for the same reasons.

Section 5.128 (F) permits a net-metering group to allocate power produced by the group's net-metering system among members of the group. On reconsideration, the Board has decided to omit provisions requiring group allocations to be on a "percentage basis." Some utilities have commented that they can only process allocations on a percentage basis and cannot process so-called "waterfall" or "order of priority" allocations. Other utilities have expressed a preference for order-of-priority allocations. The Board has concluded that it is appropriate to allow utilities the flexibility to specify in their tariffs which methods of allocation are permissible so long as such methods are reasonable and achieve the purpose of allowing group members to share the credits generated by their net-metering system.

37. 30 V.S.A. §§ 8020(c)(1)(C) and (E).

5.129 Group System Requirements

Section 5.129 implements Section 8010(c)(2)(E) by establishing the requirements to form a net-metering group. This section is substantially similar to the requirements that were previously contained in 30 V.S.A. § 219a, except that this information need only be provided to the electric company and not to the Board.

5.130 Interconnection Requirements

Section 5.130 establishes that the interconnection of all net-metering systems shall be governed by Board Rule 5.500. The section also requires that the applicant will bear the costs of all equipment necessary to interconnect the net-metering system to the distribution grid and any distribution system upgrades necessary to ensure system stability and reliability.

5.131 Disconnection of a Net-Metering System

Section 5.131 governs the disconnection of a net-metering system from the electrical system. These procedures apply to net-metering systems only and do not supplant Board Rules 3.300 and 3.400 relating to company disconnection in general.

5.132 Electric Company Requirements

Section 5.32 (A) requires an electric company to make net-metering available to its customers consistent with the requirements of the net-metering program. The version of the net-metering program issued on June 30 included an annual cap on the total capacity of net-metering systems installed in the service territory.

This provision was the subject of significant comment. The utilities and several businesses commented that the annual cap was an important tool for protecting ratepayers from excessive costs. They stated that 4% of annual peak capacity is approximately 40 MW, which is a significant amount of new generation to integrate into the grid.

Renewable energy advocates and the Department expressed concern that annual caps are disruptive to markets. They point to past instances where the implementation of capacity caps in the net-metering program was contentious and administratively challenging.

On reconsideration, the Board has decided not to include an annual statewide or utility-specific cap in the net-metering program. While the Board strongly believes that a mechanism to avoid undue rate impacts is necessary, the Board is persuaded that the biennial update process can accomplish this function. Specifically, Section 5.127(I) allows the Board conduct an update sooner than biennially at its own discretion or upon petition by the Department. As some comments pointed out, 4% of annual peak capacity is a significant amount of generation. The Board would be likely to initiate a proceeding well before this level of development was reached in one year. Given the new requirement that large net-metering systems be located in preferred sites, the Board anticipates that the pace of development will be more controlled than it has been in the past.[38] Accordingly, the Board has removed this provision from the program.

The Board also received comments on Section 5.132 expressing opposition to potential fees. The Board observes that the language of Section 5.132(A)(3) language is similar to the existing language of Board Rule 5.107. Accordingly, the Board does not view this language as permitting any fees or charges that were not already authorized under the current program. One exception to the preceding statement is that Board Rule 5.107 prohibited electric companies from charging small net-metering systems certain fees such as those for interconnection, account establishment, special meter reading, accounting, account correction, and account maintenance of group systems. The Board has determined that this limitation is not appropriate because such fees are charges for services that directly benefit a net-metering customer. Therefore, these costs should not be socialized among other customers. The Board emphasizes that all fees contemplated under Section 5.132 are subject to Board investigation and approval and cannot be implemented at the unilateral discretion of an electric company.

5.133 Electric Company Tariffs

Section 5.133 requires an electric company to file for Board approval a rate schedule to implement the net-metering program described in the rule, to take effect on January 1, 2017. Initial tariffs must be submitted to the Board no later than October 15, 2016. Additionally, an

38. For example, over 27 MW of large net-metering systems requested interconnection in the last month of the current net-metering program. Many of these large projects would not qualify for the revised net-metering program because they were not located on preferred sites.

electric company may request additional time to implement any provision of this rule. The Board will grant reasonable requests for additional implementation time where there is good cause shown.

PART V: COMPLIANCE PROCEEDINGS

5.134 Compliance Proceedings

Section 5.134 establishes procedures for ensuring that a net-metering system is constructed and operated in compliance with the terms of its CPG, this rule, and any other applicable law within the Board's jurisdiction to enforce. When a complaint is filed, the Board will refer the complaint to the Department of Public Service for investigation. The Board will also provide a copy of the complaint to the CPG holder for a response. The Department will have an opportunity to make a recommendation to the Board as to whether a compliance proceeding should be initiated. After reviewing the complaint, any recommendation from the Department, and any response from the CPG holder, the Board may take any of the steps described in Section 5.134(B) if it determines there is good cause to do so. If the Board determines that there is not good cause to initiate a compliance proceeding, then the Board will communicate that fact to the complainant and CPG holder and take no further steps in response to the complaint.

V. CONCLUSION

For the above described reasons, the attachment to the June 30 Order is hereby modified as reflected in Attachment A. This document will be effective on January 1, 2017, unless or until it is superceded by a rule duly adopted pursuant to the requirements of Chapter 25 of Title 3. In due course, the Board will withdraw proposed rule 16P010 from the Vermont Secretary of State and file Attachment A as a new proposed rule. Information about the rulemaking will be available on the Board's website as soon as it is available.

SO ORDERED.

Dated at Montpelier, Vermont, this 29th day of August, 2016.

s/James Volz)
) PUBLIC SERVICE
)
s/Margaret Cheney) BOARD
)
) OF VERMONT
s/Sarah Hofmann)

OFFICE OF THE CLERK

FILED: August 29, 2016

ATTEST: s/Judith C. Whitney
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@vermont.gov)

Notice of Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and Order.